

Patent Claims

1. A thyristor arrangement having
 - a main thyristor (1), which has a cathode (11) and an anode (12),
 - at least one auxiliary thyristor (2), which has a cathode (21) and an anode (22),
 - a resistance device (3), which electrically connects the cathode (21) of the auxiliary thyristor (2) and the cathode (11) of the main thyristor (1) to one another and defines an ohmic resistance that is different from zero,
 - an anode connection (5), which electrically connects the anode (21) of the auxiliary thyristor (2) and the anode (12) of the main thyristor (1) to one another, and
 - a triggering device (4) for breakover triggering of the main thyristor (1) via the auxiliary thyristor (2) and the resistance device (3),characterized in that
 - the resistance device (3) defines a time-dependent ohmic resistance in such a way that this resistance has a relatively large value during a switch-on phase of the main thyristor (1) and a relatively small value during a current-carrying phase of the main thyristor (1).
2. The thyristor arrangement as claimed in claim 1, characterized in that the resistance automatically decreases from the relatively large value to the relatively small value.
3. The thyristor arrangement as claimed in claim 2, characterized in that the resistance device (3) has an ohmic resistance (31) of an essentially fixed value and an inductance and/or capacitance (32).
4. The thyristor arrangement as claimed in claim 3,

characterized in that the resistance device (3) is a parallel circuit comprising the ohmic resistance (31) of the

essentially fixed value and the inductance and/or capacitance (32).

5. The thyristor arrangement as claimed in claim 3,
5 characterized in that the resistance device (3) is a series circuit comprising the ohmic resistance (31) of the essentially fixed value and the inductance and/or capacitance (32).

10 6. The thyristor arrangement as claimed in claim 4 or 5, characterized in that the electrical anode connection (54) is a short circuit.

7. The thyristor arrangement as claimed in claim 5,
15 characterized in that the anode connection (5) has a series circuit comprising an inductance and/or capacitance (52) and a parallel circuit comprising an ohmic resistance (51) and a further inductance and/or capacitance (53).

20

8. The thyristor arrangement as claimed in one of the preceding claims, characterized in that the main thyristor (1) with its cathode (11) and anode (12), the auxiliary thyristor (2) with its cathode (51) and anode
25 (22), the resistance device (3), the anode connection (5) and the triggering device (4) are integrated on a common body (10) made of semiconductor material.

9. The thyristor arrangement as claimed in claim 8,
30 characterized in that the resistance device (3) has an integrated inductance in the form of a spiral (7) which is made of electrically conductive material and is formed on the body (10) made of semiconductor material.

35 10. The thyristor arrangement as claimed in one of claims 1 to 7, characterized in that the main thyristor (1) with its cathode (11) and anode (12) is integrated on one body (10) made of semiconductor material, and in

that the auxiliary

thyristor (2) with its cathode (21) and anode (22) is integrated on another body (20) made of semiconductor material.

- 5 11. The thyristor arrangement as claimed in one of the preceding claims, in particular as claimed in one of claims 8 to 10, characterized in that the triggering device (4) is an optical triggering device which is integrated on a body (10, 20) made of semiconductor material of the auxiliary thyristor (2).
- 10